

# CALIFORNIA STATE DEPARTMENT OF PUBLIC HEALTH

GILES S. PORTER, M.D., Director

## Weekly Bulletin



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EDITOR

### *The Analysis and Interpretation of Vital Statistics\**

By JACQUES P. GRAY, M.D., Epidemiologist, San Francisco Department of Health

It has been aptly stated that vital statistics bear the same relation to public health practice that accountancy bears to business. In any given business, the state or condition of the affairs of that institution are determined by methods involving accountancy. The extent of detail in the procedures used is dictated by the magnitude of the business itself. So it is in public health, that the scope of the activities of the organization concerned direct the extent of the studies in vital statistics; but is to be remembered that in well kept and orderly records, is found the most useful evidence of the true state of affairs of the public health.

In a five-minute paper it is obvious that the analysis and interpretation of vital statistics can be but touched upon. It is believed advisable, therefore, to limit this brief discussion to the broader aspects of the usefulness of such data, more particularly to the part-time health officer in the smaller population group.

Vital statistics, too often interpreted as referring only to birth and death registration figures, properly include "statistics of population, births, marriages, deaths and the occurrence of disease, and the conditions attending these events." Their origin is ancient and their importance has long been recognized. The close relationship that exists between these various data precludes their divorce. If their full value is to be realized, their compilation must be correlated, and,

if possible, made by agencies more closely connected than at present exist in most instances.

The accuracy of data presented in birth, death and reportable disease registration depends, of course, upon the privately practicing physician. It is well recognized that it is the unusual physician who is fully cognizant of his responsibility and who conscientiously carries out his duties in regard to these matters. In most instances the laxity of reporting is not wilful, but is the result of haste and lack of attention to detail. To correct this attitude, on the part of the man in clinical medicine, is the responsibility of the health officer. On proper tactful approach, most physicians are found to be cooperative and amenable to the public health viewpoint. Persistence and frequent contact with the practicing physicians of the area will do much toward building up the friendly attitude which is necessary for cooperation.

The metropolitan department of public health usually includes a vital statistician who makes a more or less detailed study of each birth and death certificate. Frequently, also, trained personnel are available for similar work with communicable disease records. The results of their studies are usually seen in tabulations, charts, graphs and spot maps, which are not infrequently published. While all these are very desirable and are highly useful in public health administration, it must be remembered that the cost

\* Read before Health Officers' Section, League of California Municipalities, Monterey, September 23, 1931.

of elaborate studies prohibits their use outside the cities. The justification for such work lies in the usefulness of the data compiled. The inadequate budget and personnel granted by most of the smaller units of government permit of only the minimum of public health work. It is mandatory, therefore, that those studies in vital statistics made locally must be both economical and essential.

The analysis of vital statistics, that is, of birth, marriage, mortality and morbidity registration, on a basis of population, is usually accomplished by tabulation of the details given on the certificates and cards filed as required by law. The extent of these tabulations is directed by the scope of the work to be provided for in the area concerned. The minimum for births should include tables covering: date of birth, district, sex, color, use of silver nitrate or other prophylactic, hospital or home delivery and physician or midwife attending. For mortality, the tables should include: date of death, district, age, sex, race, occupation and duration of the illness, all for several important causes of death and a group of "all others." In communicable and preventable diseases, the compilation should be made for: date of onset, district, age, sex, race, school attended, contacts, source of infection, immunization, hospitalization, home care and results.

The interpretation of such tables will indicate the necessity of greater concentration on one or another of the departmental activities. Infant and maternal mortality rates will dictate whether more diligence is demanded in infant and maternal hygiene. The mortality rate of tuberculosis in adolescents may show that this group requires more consideration. The diphtheria morbidity and mortality rates may show that an immunization campaign is urgent. The typhoid fever morbidity and mortality rates may renew interest in water supply and sewage disposal. Expectancy rates for the various reportable diseases may be computed readily and easily when the records have been well kept over a period of several years. These are but a few of the many questions which can be answered by vital statistics. The policy of the well administered department is frequently directed by the rates determined from these data.

Statistics, vital and others, have frequently been accused of being the driest of dry reading material and the superlative of lies. However, if the cooperation of the reporting physician is had, if the records are reasonably complete and well kept, if sincere effort is made to interpret the facts as presented, even in the most simple and least complicated way, vital statistics may present the most interesting pictures of the community's history. Vital statistics are and should be used as accountancy in public health work.

## **STATE HELPS TO PREVENT BLINDNESS IN BABIES**

The prevention of blindness in babies is one of the important functions of the California State Department of Public Health. A few drops of a weak solution of nitrate of silver placed in the eyes of newly born infants is most effective in the prevention of blindness which occurs frequently in babies who do not receive this protection.

Under the law, the State Department of Public Health is authorized to distribute nitrate of silver for this purpose to doctors and midwives without cost. Until recently, this material has been purchased at considerable expense. Under a new arrangement, however, the outfits for the prevention of blindness in babies are manufactured in the department's laboratory and at a considerable saving in State funds.

Nothing can arouse more pity than a blind baby and since the application of these "drops" is effective in the prevention of blindness their use is effective in saving a life of misery to the individual and in saving the expense of possible institutional care to the State. Laws which require the application of a prophylactic in the eyes, at birth, are in force in many states. In California, the law is not mandatory, but provision is made for securing the preventive agent at no cost. Last month more than 3000 outfits for this purpose were distributed by the State Department of Public Health. During the last biennial period, 1929-1930, more than 25,000 of these outfits were sent out by the department.

## **HEALTH MYTHS AND HEALTH FACTS**

Dr. Donald B. Armstrong, at the recent meeting of the American Public Health Association in Montreal, urged teachers and those engaged in telling health facts to the public to stick to the "Grade A" facts. He emphasized the axiom that those things which are worth telling should be important and should be true. Among current health myths he cited the one that "A clean tooth never decays" and the relationship of underweight to tuberculosis in the school child. Among the true "Grade A" health facts, he mentioned certainties as to the source of infection in some communicable diseases, the value of immunization in the prevention of certain diseases, the value of minerals and vitamins in the diet, and the value of sunlight under certain conditions.

Medicine is as old as the human race, as old as the necessity for the removal of DISEASE.—Haeser.

## GETTING THE CHILD READY FOR SCHOOL LIFE

It is stated by the United States Public Health Service that properly to prepare children for school life is one of the most important duties of parents. Just as it is the duty of the community to provide adequate facilities to the end that every boy and girl may be given the opportunity to secure an education, so it is the duty of the parents to see that, so far as lies within their power, their children shall be in the best mental and physical condition to enter upon school life. Children with strong, clean bodies and minds not warped by fear or other unnatural emotions, are happy, and more quickly adjust themselves to their new surroundings.

The provision of proper food and clothing, training in good habits of hygiene, and regulation of sleep and rest are all part of the parents' duty in preparing their child for school life. The public health program includes, in addition, the correction of such physical defects as are amenable to treatment, and the securing for the child immunization against diphtheria and vaccination against smallpox.

Preparation for school life does not begin just a few days, a few weeks, or a few months before the child starts to school; the period of preparation covers the whole time from birth to school age. Training in habits affecting health and development should begin early in life. Regular hours of sleep and rest, regular habits of eating, proper attention to body cleanliness, and care of the bowels are best begun at the earliest possible age. Before a baby is many weeks old the mother is aware of the importance of establishing for her baby those habits which make for his health and happiness; for a well-regulated and healthy baby is invariably a happy and contented child.

It is interesting to observe with what ease a child may be taught to clean his teeth. As a child learns to feed himself by watching others and trying to use his fork and spoon, in the same manner and just as early in life he may be taught to use a toothbrush. If the first teeth are cleaned regularly and examined at frequent intervals for the earliest evidence of decay, they may usually be kept in service for their normal period. Neglected "baby teeth" not only lead to a chronic diseased condition of the parts about the tooth which often persist and are present when the permanent teeth appear, but they are lost before the normal time and the child is deprived of their use. Also the early loss of the first teeth may cause delayed eruption of the permanent teeth and increase the tendency of such teeth to assume a poor position when they do

appear. Improper nutrition and slow physical development are frequently associated with bad teeth.

During the preschool or "toddling age," is the best time to learn of any physical defect which should be corrected. If examination for such defects is left for the school nurse or school physician, the child not only loses the advantage to be gained by earlier correction, but later, in many instances, must actually lose time from school while such corrections are being made. Therefore, a child is not ready for school until these defects have received attention. Minor defects of the nose and throat, which often are easily and quickly corrected, when neglected greatly influence the incidence of minor and often serious respiratory infections.

## COLD STORAGE WAREHOUSES FULL

The amount of material in cold storage warehouses at the end of the first quarter of the present year was especially large. A total of more than one hundred million pounds of foodstuffs were held in cold storage at that time. Of this amount, 55,500,000 pounds were fresh fruits, 30,118,000 pounds of vegetables, 6,357,000 pounds of meat, 3,151,000 pounds of poultry, 5,000,000 pounds of egg meat, 3,315,000 pounds of nuts, 1,943,000 pounds of fish, 2,900,000 pounds of dried, frozen and preserved fruits, 1,237,000 pounds of fruit and berry pulp, 1,480,000 pounds of cheese, and 431,000 pounds of citrus fruits.

## APPLICATION FOR SEWAGE DISPOSAL PERMIT PENDING

The following application for sewage disposal permit is pending before the State Board of Public Health, action to be taken at the next meeting of the board to be held in Room 337, State Building, San Francisco, on November 14, 1931:

**DOHENY PARK, CAPISTRANO BEACH SANITARY DISTRICT**—To construct settling tanks and separate sludge digester on north side of Santa Fe Railroad tracks, near depot, and dispose of effluent and digested sludge (intermittently) into Pacific Ocean, 2000 feet from low tide.

"We need science in education and much more of it than we now have, not primarily to train technicians for the industries which demand them, though that may be important, but much more to give everybody a little glimpse of the scientific mode of approach to life's problems, to give everyone some familiarity with at least one field in which the distinction between correct and incorrect or right and wrong is not always blurred and uncertain, to let everyone see that it is not true that 'one opinion is as good as another'."—*Dr. Robert A. Millikan.*

**MORBIDITY \*****Diphtheria.**

82 cases of diphtheria have been reported, as follows: Alameda County 1, Oakland 1, Fresno 1, Kern County 1, Los Angeles County 14, Compton 2, Hermosa 1, Long Beach 3, Los Angeles 35, Santa Monica 2, Torrance 1, Maywood 1, Bell 1, Monterey County 1, Santa Ana 1, Riverside County 2, Sacramento 1, Upland 2, San Diego 1, San Francisco 1, Santa Barbara 2, Modesto 2, Sutter County 1, Tulare County 2, Ventura County 1, Ventura 1.

**Scarlet Fever.**

126 cases of scarlet fever have been reported, as follows: Alameda County 3, Oakland 8, Colusa 1, Fresno County 1, Kern County 2, Kings County 1, Los Angeles County 3, Alhambra 4, Compton 1, Glendale 1, Huntington Park 1, Long Beach 4, Los Angeles 55, Whittier 1, Madera 1, Pacific Grove 1, Huntington Beach 1, Seal Beach 1, Placentia 1, Riverside County 4, Sacramento 1, Upland 1, San Diego 2, San Francisco 5, Lodi 1, Tracy 4, San Luis Obispo County 1, San Luis Obispo 2, San Jose 1, Santa Cruz 2, Shasta County 6, Sutter County 1, Yuba City 1, Tulare County 1, Visalia 1, Ventura 1.

**Measles.**

68 cases of measles have been reported, as follows: Alameda County 1, Berkeley 1, Oakland 3, Colusa 1, Hercules 1, Humboldt County 7, Kings County 1, Hanford 1, Los Angeles County 1, Los Angeles 5, Pasadena 1, Santa Monica 2, Pacific Grove 2, Anaheim 1, Sacramento 16, San Diego 2, San Francisco 7, San Mateo County 1, Santa Cruz County 5, Santa Cruz 7, Lindsay 1, Woodland 1.

**Smallpox.**

7 cases of smallpox have been reported, as follows: Hanford 2, San Francisco 5.

**Typhoid Fever.**

6 cases of typhoid fever have been reported, as follows: Kern County 1, Los Angeles County 1, Santa Monica 1, Sacramento 1, San Francisco 1, Yolo County 1.

**Whooping Cough.**

99 cases of whooping cough have been reported, as follows: Albany 1, Berkeley 6, Oakland 4, Contra Costa County 2, Humboldt County 17, Los Angeles County 5, Beverly Hills 1, Long Beach 2, Los Angeles 25, Pasadena 9, Sierra Madre 1, Signal Hill 1, Sausalito 1, Orange County 3, Seal Beach 1, Riverside 2, San Diego 2, San Francisco 4, Stockton 6, San Luis Obispo County 1, San Jose 3, Ventura County 2.

**Meningitis (Epidemic).**

2 cases of epidemic meningitis have been reported, as follows: Long Beach 1, Sacramento 1.

**Poliomyelitis.**

6 cases of poliomyelitis have been reported, as follows: San Jose 1, Los Angeles 2, Larkspur 1, San Francisco 1, Turlock 1.

**Food Poisoning.**

3 cases of food poisoning have been reported, as follows: Santa Monica 1, San Francisco 2.

**Undulant Fever.**

Anaheim reported one case of undulant fever.

\* From reports received on October 26th and 27th for week ending October 24th.

**COMMUNICABLE DISEASE REPORTS**

Disease	1931			Reports for week ending Oct. 24 received by Oct. 27	1930			Reports for week ending Oct. 25 received by Oct. 28		
	Week ending				Oct. 4	Week ending				
	Oct. 3	Oct. 10	Oct. 17			Oct. 11	Oct. 18			
Actinomycosis-----	0	0	0	0	0	0	0	1		
Anthrax-----	0	0	0	0	3	0	0	0		
Beri-beri-----	0	1	0	0	0	0	0	0		
Chickenpox-----	67	95	84	140	88	134	143	168		
Coccidioidal Granuloma-----	3	2	0	0	1	0	0	1		
Diphtheria-----	72	62	76	82	43	58	58	69		
Dysentery (Amoebic)-----	0	0	14	6	1	0	0	1		
Dysentery (Bacillary)-----	12	4	7	6	3	3	10	1		
Encephalitis (Epidemic)-----	1	0	2	0	1	1	0	2		
Erysipelas-----	11	7	7	17	7	8	7	9		
Food Poisoning-----	44	1	10	3	1	4	5	2		
German Measles-----	5	6	6	7	7	7	9	5		
Gonococcus Infection-----	163	167	233	150	132	148	150	150		
Hookworm-----	1	0	0	0	0	0	1	0		
Influenza-----	30	74	67	37	31	26	20	23		
Jaundice (Epidemic)-----	0	2	0	0	0	1	0	0		
Leprosy-----	0	1	0	0	1	0	0	0		
Malaria-----	0	3	3	4	1	1	1	0		
Measles-----	67	96	75	68	82	69	125	86		
Meningitis (Epidemic)-----	7	3	7	2	0	3	2	8		
Mumps-----	44	61	86	87	118	97	111	131		
Ophthalmia Neonatorum-----	2	0	0	1	0	1	0	0		
Paratyphoid Fever-----	4	0	0	0	0	0	0	0		
Pellagra-----	1	1	1	0	3	0	0	3		
Pneumonia (Lobar)-----	34	44	27	32	22	41	42	54		
Poliomyelitis-----	6	8	8	6	70	76	85	72		
Rabies (Animal)-----	4	4	12	4	13	9	23	14		
Scarlet Fever-----	109	71	107	126	82	83	65	66		
Septic Sore Throat-----	1	1	0	0	0	0	0	0		
Smallpox-----	4	10	3	7	16	23	6	11		
Syphilis-----	194	159	222	175	161	154	167	130		
Tetanus-----	2	1	0	2	2	1	2	1		
Trachoma-----	10	15	74	14	1	1	6	7		
Trichinosis-----	1	0	12	0	1	1	0	2		
Tuberculosis-----	230	192	173	157	226	200	271	157		
Tularemia-----	2	0	0	0	0	1	0	1		
Typhoid Fever-----	26	16	8	6	18	13	17	14		
Undulant Fever-----	2	1	3	1	3	3	1	0		
Whooping Cough-----	95	93	101	99	100	105	85	66		
<b>Totals-----</b>	<b>1,254</b>	<b>1,201</b>	<b>1,428</b>	<b>1,239</b>	<b>1,238</b>	<b>1,272</b>	<b>1,412</b>	<b>1,255</b>		